Singerman, Joel

From: Eaton, Daniel J (DEC) <daniel.eaton@dec.ny.gov>
Sent: Friday, August 27, 2021 10:39 AM
To: Garbarini, Doug; Singerman, Joel; Tsiamis, Christos
Cc: Pat Van Rossem; Young, Terry W; jjalonzo@demaximis.com; michael.benoit@arcadis.com; Daniel.amate@gza.com; stephen.raymond@gza.com; Miller, John Y (DEC); Brown, Janet E (DEC); Deyette, Scott (DEC)
Subject: Further response to EPA questions on Citizens remedy
Attachments: Citizens MGP_Responses qeustions on the 2021-08-27 Meeting Agenda.docx

Doug et al,

I inadvertently neglected to include a response to the EPA inquiry on implementing solutions used at the West 18th Street site. The response is conveyed here and is embedded in the attached agenda and response document.

Dan

1. EPA asked why we aren't/can't/haven't implemented remedial elements #2 and 3 from the Con Ed West 18th St OU-3 site (Doug MacNeal – DEC PM) at the Citizens MGP (i.e., why we didn't grout at the bottom of the Citizens barrier wall as extra protection to prevent tar migration to the canal (#2), and why didn't or can't we require extra thick slabs with a vapor barrier (#3)?

   Regarding the remedial elements for the W. 18th OU3 site the element #2 stated that a subsurface barrier wall will be installed around the site on three sides. The original plan was to utilize a jet-grout wall around the perimeter. The actual barrier wall constructed consisted of water-tight (sealed with Adeka P-200) sheet pile walls that keyed into a clay layer approximately 35 feet below ground surface around 2 ½ sides of the perimeter. The remaining barrier wall utilized the existing grout wall and sheet pile from an adjacent building as the other 1 ½ sides of the perimeter. The method for connecting the new sheet pile to the existing grout wall and sheet pile was through the use of a grout tie-in wall. This grout tie-in wall was simply five 6-inch diameter overlapping borings that extended into the same clay layer and "connected" the site sheeting with the existing grout wall and sheet pile.

   At the Citizens site the sheetpile were installed to an elevation of -40' (which is approximately 42 feet below ground surface) over approximately 880 linear feet. As shown in multiple investigations the tar at depth is discontinuous in areal extent and in varying quantities making the method of grouting at the bottom of the entire wall infeasible and unnecessary.

   The remedial element #3 stated that the subsurface floor and walls of the new building would be isolated from the remaining contamination, using a mud slab on the floor and waterproofing on the floor and walls. First, a mud slab is essentially just that – a layer of concrete with no reinforcement. The primary purpose is on projects with high water tables (the bottom basement slab in this case was 8-9 feet below the water table) the use of the mud slab establishes a working platform to maintain the structural integrity at the base of the building footings, and a stable surface for installing waterproofing membrane. It is not used for remedial purposes even though it could be viewed that way. The original plan was to install a 2-foot thick mud slab on the floor, but that was changed to a 6-inch slab with 18 inches of clean material underneath. The vapor/waterproofing was then placed over the slab and up the outside of the foundation walls, and the basement floor poured over the top of this membrane.

At the Citizens site there isn't a shallow water table on the western portion of the site but the foundations could come close on the eastern portion (closer to the canal). Most new commercial construction includes this vapor/waterproofing membrane already, but, if not, could easily be requested at a minimal cost to the developer.